UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,010	04/20/2001	Claude Basso	RAL920000121US1	2720

25299 7590 10/18/2004		EXAMINER
IBM CORPORATION		MOORE JR, MICHAEL J
PO BOX 12195		
DEPT 9CCA, BLDG 002	ART UNIT	PAPER NUMBER
RESEARCH TRIANGLE PARK, NC 27709	2666	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/839,010	BASSO ET AL.
	Examiner	Art Unit
	Michael J. Moore, Jr.	2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 April 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-11* is/are rejected.

7)☒ Claim(s) *6 and 12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/20/2001*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1.   The information disclosure statement (IDS) submitted on 4/20/2001 is in

compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has

considered the information disclosure statement.

Claim Objections

2.   Claims **1-12** are objected to because of the following informalities:

Regarding claim **1**, on line 3, the word "the" between words "storing" and "frame"

should be –a--. Lastly, on line 16, the word "the" before word "free" should be –a--.

Regarding claim **2**, on line 5, the word "the" before word "next" should be –a--.

On line 6, the word "the" before word "offset" should be –an--. Also, the word "the"

before word "first" should be –a--. On line 8, the word "the" before word "offset" should

be –a--. Also, the word "the" before word "last" should be –a--.

Regarding claim **3**, on line 5, the word "the" before word "next" should be –a--.

On line 6, the word "the" before word "total" should be –a--. On line 8, the word "the"

before word "address" should be –a--. Also, the word "the" before word "first" should be

–a--. On line 9, the word "the" before word "starting" should be –a--. On line 11, the

word "the" before word "ending" should be –a--. Lastly, on line 13, the word "the" before

words "format", "type", and "frame" should each be –a--.

Regarding claim **4**, on line 3, the word "the" before word "head" should be –a--.

On line 4, the word "the" before word "head" should be –a--. On line 6, the word "the"

before word "buffer" should be –a--. On line 7, the word "the" before word "first" should

be –a--. Also, the word "the" before word "starting" is not needed. On line 10, the word

"the" before word "number" should be –a--. On line 12, the word "the" before word

"entire" should be –an--. On line 13, the word "the" before words "frame" and "tail"

should each be –a--.

Regarding claim **5**, on line 4, the word "the" before word "address" should be –

an--. On line 5, the word "the" before word "head" should be –a--. On line 6, the word

"the" before word "total" should be –a--. Also, the word "the" before word "top" should

be –a--. Lastly, on line 9, the word "the" before word "tail" should be –a--.

Regarding claim **6**, on line 17, the word "the" before word "free" should be –a--.

Regarding claim **7**, on line 2, the word "the" before word "frame" should be –a--.

Lastly, on line 17, the word "the" before word "free" is not needed.

Regarding claim **8**, on line 4, the word "the" before word "next" should be –a--.

On line 5, the word "the" before word "offset" should be –an--. Also, the word "the"

before word "first" should be –a--. On line 7, the word "the" before word "offset" should

be –a--. Also, the word "the" before word "last" should be –a--.

Regarding claim **9**, on line 4, the word "the" before word "next" should be –a--.

On line 5, the word "the" before word "total" should be –a--. On line 7, the word "the"

before word "address" should be –a--. Also, the word "the" before word "first" should be

–a--. On line 8, the word "the" before word "starting" should be –a--. On line 10, the

word "the" before word "ending" should be –a--. Lastly, on line 12, the word "the" before

words "format", "type", and "frame" should each be –a--.

Regarding claim **10**, on line 3, the word "the" before word "head" should be --a--.

On line 5, the word "the" before word "head" should be --a--. On line 7, the word "the"

before word "buffer" should be --a--. On line 8, the word "the" before word "first" should

be --a--. Also, the word "the" before word "starting" is not needed. On line 10, the word

"the" before word "number" should be --a--. On line 12, the word "the" before word

"entire" should be --an--. Also, the word "is" between words "frame" and "written" should

be --being--. On line 13, the word "the" before words "frame" and "tail" should each be --

a--.

Regarding claim **11**, on line 4, the word "the" before word "address" should be --

an--. On line 5, the word "the" before word "head" should be --a--. On line 6, the word

"the" before word "total" should be --a--. Also, the word "the" before word "top" should

be --a--. Lastly, on line 9, the word "the" before word "tail" should be --a--.

Regarding claim **12**, on line 16, the word "the" before word "free" should be --a--.

Appropriate correction is required.

Double Patenting

3.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11
F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225
USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA
1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*,
418 F.2d 528, 163 USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be
used to overcome an actual or provisional rejection based on a nonstatutory double
patenting ground provided the conflicting application or patent is shown to be commonly
owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4.   Claims **1-5 and 7-11** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims **1-5 and 7-11** of copending Application No. 09/839079. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following correspondences.

Regarding claim 1, "storing a frame to be fragmented in a series of buffers, chained together by a linked list" corresponds to "storing the frame to be transmitted in a series of buffers, chained together by a linked list" in claim 1 of the copending application. "Associating a buffer control block with each buffer" corresponds to "associating a buffer control block with each buffer" in claim 1 of the copending application. "Associating a frame control block with each frame" corresponds to "associating a frame control block with each frame" in claim 1 of the copending application. "Receiving frames into a queue to await dispatch to a network processor" corresponds to "receiving frames into a queue to await dispatch by a network processor" in claim 1 of the copending application.

"Associating a queue control block with a queue of frames to be transmitted" corresponds to "associating a queue control block with the queue of frames to be transmitted" in claim 1 of the copending application. "Assigning additional buffers and additional frame control blocks for each multicast target and linking these additional frame control blocks with the original frame control block associated with the frame"

corresponds to "assigning additional buffers and additional frame control blocks for each

multicast target and linking these additional frame control blocks with the original frame

control block associated with the frame" in claim 1 of the copending application. "Using

a multicast counter to determine when all frame fragments have been transmitted"

corresponds to "using a multicast counter to determine when the frame has been sent to

each of the multicast targets" in claim 1 of the copending application. "Returning buffers

and frame control blocks assigned to each fragment to a free queue as each fragment is

transmitted" corresponds to "returning the buffers and frame control blocks assigned to

each multicast target to free queues as the frame is sent to each target" in claim 1 of the

copending application. Lastly, "returning the original buffers and frame control block to

the free queues after the frame has been sent to all of the multicast targets"

corresponds to "returning the original buffers and frame control blocks to the free

queues after the frame has been sent to all of the multicast targets" in claim 1 of the

copending application.

Claim 1 differs from claim 1 of the copending application in that the instant

application claims "a method of IP fragmentation on a network processor" whereas the

copending application claims "a method of multicast transmission on a network

processor". However, the claimed steps of execution of these methods are the same.

Therefore, it would be obvious to someone of ordinary skill in the art to use the method

of multicast transmission on a network processor of the copending application for IP

fragmentation.

Regarding claim **2**, this claim contains identical limitations as claim **2** of the copending application.

Regarding claim **3**, this claim contains identical limitations as claim **3** of the copending application.

Regarding claim **4**, this claim contains identical limitations as claim **4** of the copending application.

Regarding claim **5**, this claim contains identical limitations as claim **5** of the copending application.

Regarding claim **7**, "means for storing a frame to be fragmented in a series of buffers, chained together by a linked list" corresponds to "means for storing a frame to be transmitted in a series of buffers, chained together by a linked list" in claim **7** of the copending application. "Means for associating a buffer control block with each buffer and associating a frame control block with each frame" corresponds to "means for associating a buffer control block with each buffer and associating a frame control block with each frame" in claim **7** of the copending application. "Means for receiving frames into a queue to await dispatch to a network processor" corresponds to "means for receiving frames into a queue to await dispatch" in claim **7** of the copending application. "Means for associating a queue control block with a queue of frames to be transmitted" corresponds to "means for associating a queue control block with the queue of frames to be transmitted" in claim **7** of the copending application.

"Means for assigning additional buffers and additional frame control blocks for each multicast target and linking these additional frame control blocks with the original

frame control block associated with the frame" corresponds to "means for assigning additional buffers and additional frame control blocks for each multicast target and linking these additional frame control blocks with the original frame control block associated with the frame" in claim 7 of the copending application. "Means using a multicast counter for determining when all frame fragments have been transmitted" corresponds to "means using a multicast counter for determining when the frame has been sent to each of the multicast targets" in claim 7 of the copending application. Lastly, "means for returning buffers and frame control blocks assigned to each fragment to the free queue as each fragment is transmitted and returning the original buffers and frame control block to the free queues after the frame has been sent to all of the multicast targets" corresponds to "means returning the buffers and frame control blocks assigned to each multicast target to free queues as the frame is sent to each target and returning the original buffers and frame control blocks to the free queues after the frame has been sent to all of the multicast targets" in claim 7 of the copending application.

Claim 7 differs from claim 7 of the copending application in that the instant application claims "a network processor for processing IP fragmentation" whereas the copending application claims "a network processor supporting multicast transmission". However, the claimed means of these processors are the same. Therefore, it would be obvious to someone of ordinary skill in the art to use the network processor supporting multicast transmission of the copending application for IP fragmentation.

Regarding claim 8, this claim contains identical limitations as claim 8 of the copending application.

Regarding claim **9**, this claim contains identical limitations as claim **9** of the copending application.

Regarding claim **10**, this claim contains identical limitations as claim **10** of the copending application.

Regarding claim **11**, this claim contains identical limitations as claim **11** of the copending application.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

5.   Claims **6 and 12** are allowable over the prior art of record.

6.   The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim **6**, the prior art of record teaches a queuing/dequeuing method that makes use of queue descriptors, packet descriptors, and buffer descriptors (control blocks) in a linked list data structure. The prior art of record also teaches the release of descriptors to the free pointer pool after transmission is complete. The prior art of record fails to teach an IP reassembly method where buffers and frame control blocks of a reassembled frame are returned to a free queue during the frame transmission.

Regarding claim **12**, the prior art of record teaches a queuing/dequeuing means that makes use of queue descriptors, packet descriptors, and buffer descriptors (control blocks) in a linked list data structure. The prior art of record also teaches the release of descriptors to the free pointer pool after transmission is complete. The prior art of

record fails to teach a network processor for IP reassembly where buffers and frame control blocks of a reassembled frame are returned to a free queue during the frame transmission.

Upon Applicant filing a terminal disclaimer, claims **1-5 and 7-11** of the instant application would be allowable for the same reasons indicated in the Notice of Allowability concerning application no. 09/839,079.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chong et al. (U.S. 6,724,767), Hassell et al. (U.S. 6,208,650), Rana et al. (U.S. 6,781,992), Calvignac et al. (US 2002/0118694), and Verplanken et al. (U.S. 5,561,807) are all references that contain material pertinent to this application.

Any inquiry concerning this communication or earlier communications from the · examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.
Examiner
Art Unit 2666

mjm MM

FRANK DUONG
PRIMARY EXAMINER